What is claimed is:

1. A multiplexer for transporting client data from an optical serial link to a clear optical channel of a metro or wide area link comprising N STS-1s, said multiplexer comprising:

(a) a mapper configured for mapping said data to an N x STS-1 SONET payload using y STS-1s where y is 0 to N and said y STS-1s are selected on a sequential or non-sequential concatenation basis from said N STS-1s, said mapping being according to a predetermined bandwidth allocation;

(b) an aggregator configured for aggregating said mapped data into a composite STS payload comprising N STS-1s; and,

(c) a bandwidth allocation receiver configured for receiving said bandwidth allocation.

2. A multiplexer according to claim 1 and comprising n said mappers for mapping data of n clients, each said mapper mapping the data of one said client and each allocated STS-1 being allocated to one client whereby y for each said mapper is 0 to N and the total number of STS-1s allocated to said clients is less than or equal to N.

3. A multiplexer according to claim 2 wherein said bandwidth allocation is received from a source external thereto.

4. A multiplexer according to claim 3 wherein said source is a network controller.

5. A multiplexer according to claim 4 wherein n=6 and N=48.

6. A demultiplexer for demultiplexing data multiplexed by a multiplexer

according to claim 1, said demultiplexer comprising:

(a) a deaggregator configured for deaggregating said STS payload and providing said mapped data for said client;

(b) a demapper configured for demapping said client data according to said predetermined bandwidth allocation; and,

(c) a bandwidth allocation receiver configured for receiving said bandwidth allocation.

7. A demultiplexer for demultiplexing data multiplexed by a multiplexer according to claim 2, said demultiplexer comprising:

(a) a deaggregator configured for deaggregating said STS payload and providing said mapped data for said clients;

(b) n demappers configured for demapping said data of said n clients according to said predetermined bandwidth allocation; and,

(c) a bandwidth allocation receiver configured for receiving said bandwidth allocations.

8. A multiplexer/demultiplexer comprising a multiplexer according to claim 2 and a demultiplexer according to claim 7.

9. A method for multiplexing client data for transport from an optical serial link to a clear optical channel comprising N STS-1s of a metro or wide area link, comprising:

(a) mapping said data to an N x STS-1 SONET payload using y STS-1s where y is 0 to N and said y STS-1s are selected on a sequential or

non-sequential concatenation basis from said N STS-1s, said mapping being according to a predetermined bandwidth allocation; and,

(b) aggregating said mapped data into a composite STS payload of said N STS-1's.

10. A method according to claim 9 whereby data of n clients is mapped according to a predetermined bandwidth allocation, each allocated STS-1 being allocated to one client, y for each client being 0 to N and the total number of STS-1s allocated to said clients being less than or equal to N.

11. A method according to claim 10 whereby said bandwidth allocation is predetermined by any of a user, a network operator, an application and/or network conditions.